Compliance with driver's license laws and illegal licensing among commercial bus drivers in Lagos, Nigeria: Policy implications and evidence for action

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Summary

Aims and Objectives *To determine the level of compliance with driver's license laws among commercial bus drivers in Lagos, Nigeria.*

Subjects, Materials and Methods *Two intercity motor parks were selected by simple random sampling and all consenting minibus drivers participated in the study. Key Informant Interviews (KIIs) were also conducted with selected officials in the driver training and licensing authorities.*

Results *Compliance with the minimum age for driving was high (93.6%), so also was having driving test prior to driver's license procurement (83.3%). Formal driver training and VA testing were very low, (26.1% and 32.9% respectively) Overall, only 9.3% of them were found to have fulfilled all the pre-license obligations before obtaining their first driver's license. The odds of a driver with a secondary education having formal driver training is 3.33 times higher than those with no education (OR 3.33, 95% CI 1.01-11.35). Drivers who were 60 years or older were 3.62 times more likely to be compliant than those who were between 20-29 years (OR 3.62, 95% CI 0.56-29.19). For the 98.3% of them who possessed valid licenses, 52.3% of them obtained them illegally. All the key officials saw RTIs as a serious public health problem but faced several challenges in the course of their work.*

Conclusion: *Overall compliance with pre-license regulations was very poor. There is need for a review and strict enforcement of driver's license laws to improve compliance. Also vital are fostering inter-sectoral collaboration and improvement in the operations of all establishments involved in driver training and license procurement in Nigeria.*

Key words: road safety; policy; enforcement; Drivers License; Nigeria

Introduction

Road Traffic Injuries (RTIs) are a global public health problem. Worldwide, an estimated 1.24 million people are killed in road crashes each year and as many as 50 million are injured.[1] Globally, it is the eighth leading cause of death and projections indicate that by 2030, it will become the fifth leading cause of death unless there is renewed global commitment to prevention.[2,3]

Victims are usually the productive group of the population. A majority of all global road deaths and Disability Adjusted Life Years, (DALYs) lost to crashes

worldwide as a result of RTIs, occur in Low and Middle Income Countries, (LMIC). RTIs, being a health and developmental problem, have direct economic costs which run into billions of dollars in these countries. In LMIC and regions – Africa, Asia, the Caribbean and Latin America, the majority of road deaths are among pedestrians, passengers, cyclists, users of motorised two-wheelers, occupants of buses and minibuses, and passengers of public transport.[1,4] In Nigeria, a population-based survey reported an overall RTI rate of 41 per 1000 population [5] and currently, Nigeria has the highest road traffic death rates in Africa (33.7/100,000).[1] Unfortunately, the true magnitude of RTIs in Nigeria are underestimations, largely due to under reporting and poor record-keeping.[6]

The high burden of RTIs in developing countries has been attributed to growth in the numbers of motor vehicles (associated with economic growth), higher number of people killed or injured per crash, inadequate training of vehicle users, poor enforcement of road safety regulations, inadequacy of health infrastructure, and poor access to health care.[1,4,7] Many countries lack national multi-sectoral strategy on road safety, do not invest sufficiently on road safety and have existing legislations which need review.[8] The RTI problem in developing countries has not been sufficiently studied [9] and therefore it becomes imperative that research is ongoing in Africa's most populous country, Nigeria, in search of lasting solutions.

As the commercial hub of the country, Lagos has a large number of commercial vehicles in operation. The Federal Road Safety Commission (FRSC) Lagos State, reports showed a huge demand for commercial driver's licenses [10] probably due to the commercial nature of the State.

Nigeria has specified laws guiding the procurement of driver's license. Regulations demand that every applicant for driver's license undergoes training in an approved driving school and passes the driving test (conducted by the Vehicle Inspection Office, VIO). The applicant also provides a certificate of medical fitness and Visual Acuity (VA) test from a government hospital.[11] Necessary forms are obtained from the Motor Licensing Authority (MLA). Lack of formal driver training has been reported by other authors especially among commercial motorcyclists.[12-14] Eye testing before obtaining license is also low.[15,16] In a similar study setting in Ife, Osun State, the proportion of commercial drivers undergoing driving test was high and under-aged licensure low.[16] With the launching of the Decade of Action for Road Safety, 2011-2020 by the UN, attention is again focused on making the roads safer.

This study was undertaken to determine the proportions of commercial bus drivers who complied with required regulations for obtaining valid driver's license in Lagos, Nigeria. It also focuses on poor enforcement of road safety regulations as it is a major factor in the pre-crash/ prevention phase of RTIs.[17] Findings from this study would serve as empirical evidence for developing policy-brief to strengthen policy issues related to road safety.

Materials and Methods

Study area and design

Lagos State is a mega city with a population density of over 4000 individuals per square kilometer. It is the commercial and financial hub of Nigeria. The major means of transportation is by road. Minibuses, (especially 14-18 seaters) are the most commonly used vehicles for intercity transport.

This was a cross-sectional study conducted in two urban Local Government Areas (LGAs) namely Kosofe and Mainland. Both LGAs were pre-determined due to the presence of big inter-city motor parks (minimum of 100 buses); Kosofe had 4 while Mainland had 4. By simple random sampling, one out of these major inter-city parks registered with the Lagos State Ministry of Transportation was selected from each of the LGAs. About 500 minibus drivers were registered in both motor parks and all were included in the study. Ninety-three (18.6%) of them however declined to participate in the study.

Key Informant Interviews (KIIs) were also conducted to study the aspect of enforcement. One key official each from the relevant authorities responsible for driver training and regulation of license procedures was interviewed. These officials were purposively chosen because they were the highest in authority in the various establishments. They are likely to provide needed information, insights and ideas on the subject of study.[18] The relevant authorities were the Federal Road Safety Commission (FRSC), the Vehicle Inspection Office (VIO) and the Motor Vehicle Administration Agency (MVAA), (MVAA is the equivalent of Motor Licensing Authority (MLA) in Lagos State). Two driving school chief instructors were also interviewed, one from each LGA. All key informants were middle-aged men who have worked with their various establishments for a minimum period of ten years.

Data collection tools and techniques

Quantitative data was collected with a pre-tested, structured, interviewer-administered questionnaire while a pre-tested, structured interview guide was used for the KIIs. The questionnaire contained questions on the drivers' sociodemography, mode of driver training, their age at first license and whether they had visual acuity and driving tests done prior to licensing. It also contained questions on the drivers' current possession of valid driver's license and how they were obtained. Only drivers of 14-18 seater minibuses were included in the study.

Bigger buses and small taxis were excluded. Data was collected by face to face interview with the drivers in the motor parks as they were waiting to load their vehicles or as they returned from a trip. The union leaders assisted in mobilising the drivers. Five interviewers with a minimum qualification of higher diploma were recruited and trained by the principal researcher on the contents of the questionnaire. Pre-testing of the questionnaire was done among 20 inter-city minibus drivers in Mushin LGA and few adjustments made prior to actual study. The KII guide was pre-tested among similar officials in Ogun State (another Southwestern state).

Analysis was done with Epi Info V.3.5.1. Chi square and Fisher's exact tests were used to test for association between variables, with the level of significance set at 5% (pd" 0.05). In addition, Odds Ratios with Confidence Intervals were calculated to further describe the association between outcome and demographic variables. The outcome indicators measured were proportion of drivers who:

- Obtained driver's license at the stipulated minimum age of 18 years;
- Attended driving school;
- Underwent driving test before obtaining license;
- Underwent VA test before obtaining license;
- Complied with all the above regulations

The KIIs were conducted in the respective offices of the officials. They were recorded on audio tapes and later transcribed verbatim. The duration of each was 30-45 minutes. Data was analysed around relevant themes.

Ethics

The study was approved by the Research and Ethics Committee of the Lagos University Teaching Hospital (LUTH). Written informed consent was obtained from the participants prior to interview.

Results

A total of 407 drivers gave their consent and responded to the questionnaires adequately and these were analysed. Most were between 30 and 49 years, 63.1% with a mean age of 43.4 ± 10.8 years. Most, 90.2% were married and only 9.0% of them had no formal education. Most of the drivers travel a distance of 400km or less daily.

Only 26.1% of them were trained in driving schools. A majority (93.6%) of them obtained their driver's license at the age of e"18 years and older drivers were found to have fulfilled this requirement more than the younger ones with a statistically significant difference (Table i). Only one-third of them had VA test done before obtaining their licenses and 83.3% had driving tests prior to issuance of driver's license. Overall, only 9.3% of them were found to have fulfilled all the pre-license obligations before obtaining their first driver's license (Table i).Using the group with 'no education' as a reference category, the odds of a driver with a secondary education having formal driver training is 3.33 times higher than those with no education with a statistically significant difference (Table iii). Considering the factors which influence their compliance, with the age group of 20-29 years as a reference point, drivers who were 60 years or older were 3.62 times more likely to be compliant with licensing laws than those who were between 20-29 years with no significant difference (Table v). When questioned on how they obtained their current driver's license (for the 98.3% of them who possessed valid licenses), more than half (52.3%) of them did not go personally to the licensing authorities (Fig).**Some excerpts from the KIIs**

RTIs is a serious public health problem

All the officials considered RTIs a serious public health problem with a high health burden. The damage goes beyond physical injury or death "There are now more vehicles and more people on the road and so crashes occur daily." (FRSC official) "When you have a crash, it involves a lot of things– injuries, damages, obstruction on the road.

Yes, it has a direct relationship with public health." (MVAA official)

There is low uptake of services by intending drivers

All the officials reported low uptake of services. The driving school instructors remarked, "It is poor, unfortunately, they patronise road-side mechanics, panel beaters and friends for training. Not up to one per cent of those driving on the road come to learn." "The ratio of men to women who come to learn is about 1:10."

Agencies face various obstacles in following set standards

Some of the obstacles mentioned by the FRSC official include: improper/non-testing of applicants, proxy applications in processing of driver's license and lack of sufficient outlets for processing driver's license. The officials also pointed out bureaucratic conflicts between federal and state governments as obstacles.

Importance of mandatory VA test and driving test

The government officials were all of the opinion that these safety measures were key to road safety. "These are very critical elements when it comes to safe driving. If a driver has a problem with what he sees and cannot correct that problem, then you're dealing with a killer driver on the road." (FRSC official). "It is very important that drivers should know the road signs and Highway Code to enable them know what they should do while driving." (MVAA official). On the issue of VA testing, the driving school instructors' responses on the place of testing is a subject of interest. "I do it here." (referring to his office, as he

points to a Snellen Chart hanging on the wall). The other said "The VIO and FRSC do the eye test for them."

Challenges in uptake of services

The attitude of Nigerians was seen as an obstacle: "The typical Nigerian just wants to give somebody money and get it quickly. We need to change their mindset." (FRSC Official) "From what we have observed, those who fail the driving test discourage other applicants from coming for the test." (VIO official)

Table i: Fulfillment of license regulations according to age

Requirement for Licensing	Frequency (%) N = 407	Age (years) 20 – 29 n = 44	30 – 39 n = 101	40 – 49 n = 152	50 – 59 n = 76	= 60 n = 34
Attended driving school						
Yes	106 (26.0)	11 (25.0)	26 (25.7)	37 (24.3)	23 (30.3)	9 (26.5)
No	301 (74.0)	33 (75.0)	75 (74.3)	115 (75.7)	53 (69.7)	25 (73.5)
		$\chi^2 = 0.96$, df = 4, p = 0.920				
Licensed at =18years						
Yes	381 (93.6)	37 (81.1)	90 (89.1)	145 (95.4)	75 (98.7)	34 (100)
No	26 (6.4)	7 (15.9)	11 (10.9)	7 (4.6)	1 (1.3)	0 (0)
		Fisher's exact p = 0.003*				
Mean age at first license (year)	22.9 ± 4.9	19.5 ±2.6	21.8 ±4.2	23.8 ± 5.1	22.8 ±4.1	27.2 ±6.0
Had VA test						
Yes	134 (32.9)	8 (18.2)	42 (41.6)	48 (31.6)	24 (31.6)	12 (35.3)
No	273 (67.1)	36 (81.8)	59 (58.4)	104 (68.4)	52 (68.4)	22 (64.7)
		Fisher's exact p = 0.090				
Had driving test						
Yes	339 (83.3)	32 (72.7)	84 (83.2)	126 (82.9)	66 (86.8)	31 (91.2)
No	68 (16.7)	12 (27.3)	17 (16.8)	26 (17.1)	10 (13.2)	3 (8.8)
		$\chi^2 = 5.75$, df = 4, p = 0.220				
Complied with all the 4 requirements						
Yes	38 (9.3)	2 (4.5)	12 (11.9)	13 (8.6)	6 (7.9)	5 (14.7)
No	369 (0.7)	42 (95.5)	89 (88.1)	139 (91.4)	70 (92.1)	29 (85.3)
		Fisher's exact p = 0.490				

**Statistically significant*

Table ii: Fulfillment of license regulations according to level of education

Requirement for Licensing	Frequency (%) N = 407	Level of education None n = 37	Primary n = 147	Secondary n = 191	Post Secondary n = 32
Attended driving school					
Yes	106 (26.0)	7 (18.9)	31 (21.1)	54 (28.3)	14 (43.8)
No	301 (74.0)	30 (81.1)	116 (78.9)	137 (71.7)	18 (56.2)
		$\chi^2 = 8.55$, df = 3, p-value = 0.040*			
Licensed at =18years					
Yes	381 (93.6)	36 (97.3)	133 (90.5)	180 (94.2)	32 (100)
No	26 (6.4)	1 (2.7)	14 (9.5)	11 (5.8)	0 (0)
		Fisher's exact p = 0.170			
Mean age at first license (years)	22.9 ± 4.9	23.4 ±4.9	22.7 ±4.8	22.9 ±5.2	23.4 ±4.3
Had VA test					
Yes	134 (32.9)	14 (37.8)	47 (32.0)	68 (35.6)	5 (15.6)
No	273 (67.1)	23 (62.2)	100 (68.0)	123 (64.4)	27 (84.4)
		Fisher's exact p = 0.130			
Had driving test					
Yes	339 (83.3)	33 (89.2)	119 (81.0)	162 (84.8)	25 (78.1)
No	68 (16.7)	4 (10.8)	28 (19.0)	29 (15.2)	7 (21.9)
		$\chi^2 = 2.44$, df = 3, p-value = 0.490			
Complied with all the 4 requirements					
Yes	38 (9.3)	4 (10.8)	13 (8.8)	19 (9.9)	2 (6.3)
No	369 (0.7)	33 (89.2)	134 (91.2)	172 (90.1)	30 (3.8)
		Fisher's exact p = 0.930			

*Statistically significant

Table iii: Association between level of education and formal driver training

Level of education	Formal driver training (%) Yes n = 106	No n = 301	Total n = 407	OR(95% CI)
None	7 (18.9)	30 (81.1)	37	1
Primary	31 (21.1)	116 (78.9)	147	1.15 (0.43-3.17)
Secondary	54 (28.3)	137 (71.7)	191	1.69 (0.66-4.51)
Post secondary	14 (43.8)	18 (56.2)	32	3.33* (1.01-11.35)

*Statistically significant

Table iv: Association between age and obtaining license at the appropriate age

Age (year)	Obtaining license at = 18 years (%) Yes n = 381	No n = 26	Total n = 407	OR(95% CI)
20 – 29	37 (81.1)	7 (15.9)	44	1
30 – 39	90 (89.1)	11 (10.9)	101	1.55 (0.50-4.75)
40 – 49	145 (95.4)	7 (4.6)	152	3.92* (1.15-13.44)
50 – 59	75 (98.7)	1 (1.3)	76	14.19* (1.64-318.36)
= 60	34 (100)	0 (0)	34	Undefined

*Statistically significant

Table v: Associations between age, education and compliance with pre-license regulations

Variable	Complied with regulations (%) Yes n = 38	No n = 369	Total n = 407	OR(95% CI)
Age (years)				
20 – 29	2 (4.5)	42 (95.5)	44	1
30 – 39	12 (11.9)	89 (88.1)	101	2.83 (0.56-19.22)
40 – 49	13 (8.6)	139 (91.4)	152	1.06 (0.40-13.15)
50 – 59	6 (7.9)	70 (92.1)	76	1.80 (0.31-13.57)
= 60	5 (14.7)	29 (85.3)	34	3.62 (0.56-29.19)
Level of education				
None	4 (10.8)	33 (89.2)	37	1
Primary	13 (8.8)	134 (91.2)	147	0.80 (0.22-3.13)
Secondary	19 (9.9)	172 (90.1)	191	0.91 (0.27-3.40)
Post secondary	2 (6.3)	30 (93.8)	32	0.55 (0.06-3.89)

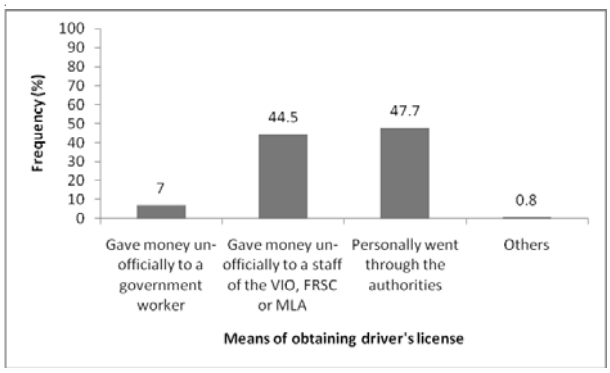

Figure: Respondents' means of obtaining driver's license (n=400)

Discussion

Overall, the compliance with driver's license laws recorded in this study is very low (9.3%), ie proportion of drivers who complied with all the 4 driver's license procurement laws (Trained in the driving school, was at least 18 years before first license and underwent the pre-license tests) We do not have any available study specifically on this subject to compare with. Compliance with formal driver training (26.1%) and having a VA test (32.9%) had the lowest compliance rates of all the attributes of the regulation. In developing countries, younger drivers (less than 50 years) have been found to have greater crash risk [19,20] and a greater proportion of our respondents were in this age group thus highlighting the importance of good practice of safety measures among them.

Poor driver training has been implicated in the high burden of RTIs in Low and Middle Income Countries (LMIC).[7] Lack of formal training as reported by other studies,[12,14,21-23] is also evident in this study. This is further corroborated by the driving school instructors who lamented that many intending drivers, especially men, do not attend driving school, but rather learn from their relatives, friends or road-side mechanics. They are clearly violating the license laws in Nigeria. This has serious implications for road safety for several reasons, one of which is the negative influence on the driver's behaviour on the road.[24] With those outside the formal setting, non-participation in the in-class training is a big issue. This is where the intending driver becomes grounded in the theory aspect of driving and the contents of the Highway Code which is fundamental to road safety. The officials recommended that appropriate training in the driving schools was very vital in RTI control. To improve on their services, the driving school officials requested government aid in procuring new vehicles for training, repair bad roads and provision of training grounds.

Driving by persons below the approved age has been associated with crashes [25] probably because of the risky behaviour that the younger age group tends to adopt. There was a high rate of compliance to the approved age among our respondents, similar to results from Osun State, (also in Southwest Nigeria) where 94% of the drivers obtained their driver's licenses at the approved age.[16] Several studies have revealed that a majority of drivers had no eye test before obtaining their driver's license.[15,16,26] Even though the law stipulates that an applicant should undergo a VA test in a government hospital, a closer look at the form MVA 13 (Medical fitness form) revealed that no provision was made for an attestation that the applicant has indeed done a VA test with satisfactory results. This may explain the low compliance with this very vital requirement and thus exposes serious regulatory flaws. This emphasizes the need to design an appropriate medical exam form for applicant drivers to include VA test. In addition, the testimonies of the driving school instructors concerning the conduct of the VA test leaves some doubt as to the credibility of the results of the VA tests conducted in these ways.

Nigeria may not be alone in this deficiency. In Australia, the guidelines on fitness to drive released by their transport commission contained serious flaws and provide limited information upon which to base decisions.[27] In the US and Canada, a systematic review of medical evaluation forms in support of licensing decisions for medically at-risk drivers utilized by Departments of Motor Vehicles (DMVs), revealed that only about half (54%) of the forms included specific sections for vision. In all, one third of forms were rated as marginal or poor in comprehensiveness and utility.[28] In Nigeria, government health facilities are usually plagued with long queues and multiple bureaucratic processes which may possibly discourage applicants from going for their eye tests. Perhaps, if facilities for conducting VA test with trained health personnel were permanently available at each VIO test centre, compliance would be better. If the existing arrangement is to be maintained, then there should be inter-sectoral collaboration to ensure the test is done by appropriate feedback of information on applicants who do not have good vision.

Driving examiners in developing countries are rarely given special training and thus driving tests may be inadequate tests of ability to drive safely in traffic on real roads,[29] but this does not underscore the importance of pre-license test as a major factor in the pre-crash/prevention phase of RTIs.[17] It is rather encouraging to know that a majority of the drivers underwent driving test before obtaining their driving licenses. Similar proportions were reported in Ife (78%) and India (78.6%).[16,30] Lower compliance rates were however observed in Benin where only 27.2% of the motorcyclists interviewed had taken a road test before being issued a license.[12] To improve service delivery, the VIO official testified that they required personnel and also appropriate training of these personnel.

Overall, only a small proportion (less than one-tenth) of the drivers complied with the pre-license requirements. This is a wake-up call for the authorities and also the community as a whole if the RTI problem is to be controlled. The role of education in road crashes [31] is buttressed in this study as the drivers with higher education had better compliance with formal driver training than those without any formal education. This was however contrary to information from the KIIs. Older drivers' overall better compliance indicates that enforcement has weakened over the years, thus suggesting that the bureaucratic system of driver licensing should be strengthened. If individual states are left to produce their own driver's license as suggested by the MVAA official, enforcement may improve.

In some developed countries, the Graduated Driver Licensing (GDL) system is operational. This system is designed to reduce traffic crash risks by slowly introducing teen drivers to the traffic environment in phases. It provides gradual access to driving privileges to new licenses. This requires satisfactory performance in vision screening, knowledge tests and parent/guardian involvement in the education. There were also problems of enforcement and parental objections with the GDL system. [32] With GDL, drivers in our study would have had ample time to fulfill all license requirements. Results from studies have shown great promise with reductions in crash rates from 5% to 60% [33] but newly-licensed drivers previously supervised by drivers with recent traffic offences have a one-third higher risk of crashing.[34]

The possession of valid driver's license by almost all the drivers interviewed is an indication that they know the law. The DL is an instrument usually demanded by the various traffic officials on road checks. In addition, it is a form of identification used in places like financial institutions, so it is not surprising that the drivers have them. This finding is comparable with several studies in which majority of the respondents had valid driver's license.[12,20,31,35,36] On the contrary, only 37.5% of motorcyclists in Calabar had a license.[22] What is rather worrisome is that a majority of these licenses were acquired illegally. The drivers were not asked the reason for their reported channel of license procurement so it is possible that this is what they have been doing over the years. This finding exposes poor enforcement of license regulations with implications for RTI prevention and control in Nigeria.

The positive effect of vehicle impoundment penalty and general enforcement on subsequent driving behaviour, traffic violations and road crashes has been documented.[37,38] Similarly, these measures may have the same effect in Nigeria as regards illegal procurement of driver's license by drivers but a robust information system is required for this and we do not have that yet. In making recommendations for preventing RTIs, the officials unanimously pointed out that proper medical check and proper testing of intending drivers including enforcement of laws with adequate resources were needed. In addition, public enlightenment and commitment by everybody to road safety were also considered vital.

This study has shown that these commercial drivers *ab-initio*, were not qualified to drive and they obtained their licenses illegally hence commuters entrust their lives to dangerous drivers. Since the conduct of this study, some changes have taken place. Since a year ago, the 3 agencies now provide services from the same location, the purpose of which is to bring services closer to drivers. In addition, the VIO conducts vision tests with the aid of a portable machine. This practice contravenes the national traffic regulations and is not conducted by trained health personnel.

In order to make meaningful progress in road safety in Nigeria, we recommend strict enforcement of driver's license laws and a review of certain aspects of those laws. Application forms should be appropriately designed and VA testing facilities with trained health personnel made available at test centres to improve compliance. Further research is however needed on enforcement and RTI outcome.

There is dearth of data on this particular topic and so this study contributes to the body of knowledge to inform design of appropriate interventions. Findings from this study have brought to light country-specific road safety problems for action by policy makers.

The drivers' responses were self-reported (apart from the drivers' licenses which were sighted) and were not verifiable due to lack of functional information system.

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